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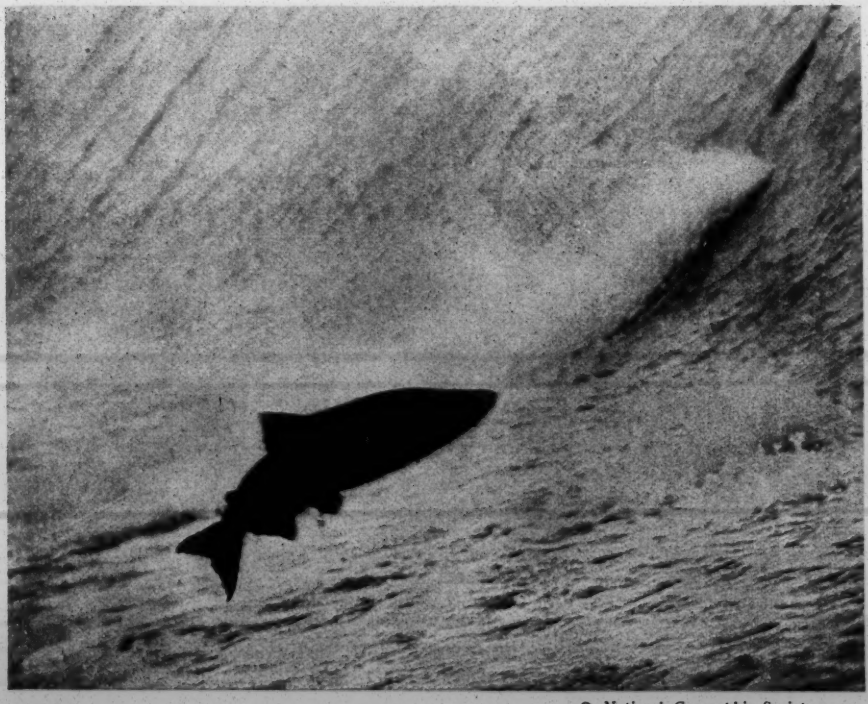
CONTENTS FOR WEEK OF JANUARY 28, 1924. Vol. II. No. 25.

1. A Possible New U. S. Territory.
2. Lignite, "Poor Relation" of Coal.
3. Mexico's Inevitable Battleground.
4. Salmon's Habits Defy Explanation by Science.
5. More Slaves Than Freemen in Ethiopia.



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SALMON LEAPING FALLS ON WAY TO HOME CREEK WHERE IT WILL SPAWN AND DIE
(See Bulletin No. 4).

HOW TO OBTAIN THE BULLETIN

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A Possible New U. S. Territory

THE POSSIBILITY of the United States having a new territory presents itself by the announcement that the proposal to encourage division of Alaska received a majority vote in recent territorial elections held in the territory's Panhandle.

Alaska, in the minds of most citizens of the United States, is a country of mountains, mines and snow, similar throughout. However, the major part of that section which recently has voted to become a separate territory is shut off from the rest of Alaska by a wall of ice no living man has crossed.

How would the map of Alaska be changed by the formation of a new territory?

Alaska's "Land Tail" of 600 Miles

Alaska presents a great square block, wedged cornerwise between the main body of North America and Siberia, obstructing an open channel of the Pacific Ocean to the North Pole. On the southernmost corner of the square block is a tail of land extending down the coast in the direction of Seattle. It runs southward for 600 miles from the longitude boundary between Alaska proper and Canada. This section reaches back from the coast to the watershed of the Canadian Rockies, a distance varying from 50 to 150 miles. It is known as the first judicial district, or the Panhandle, an accurately descriptive term.

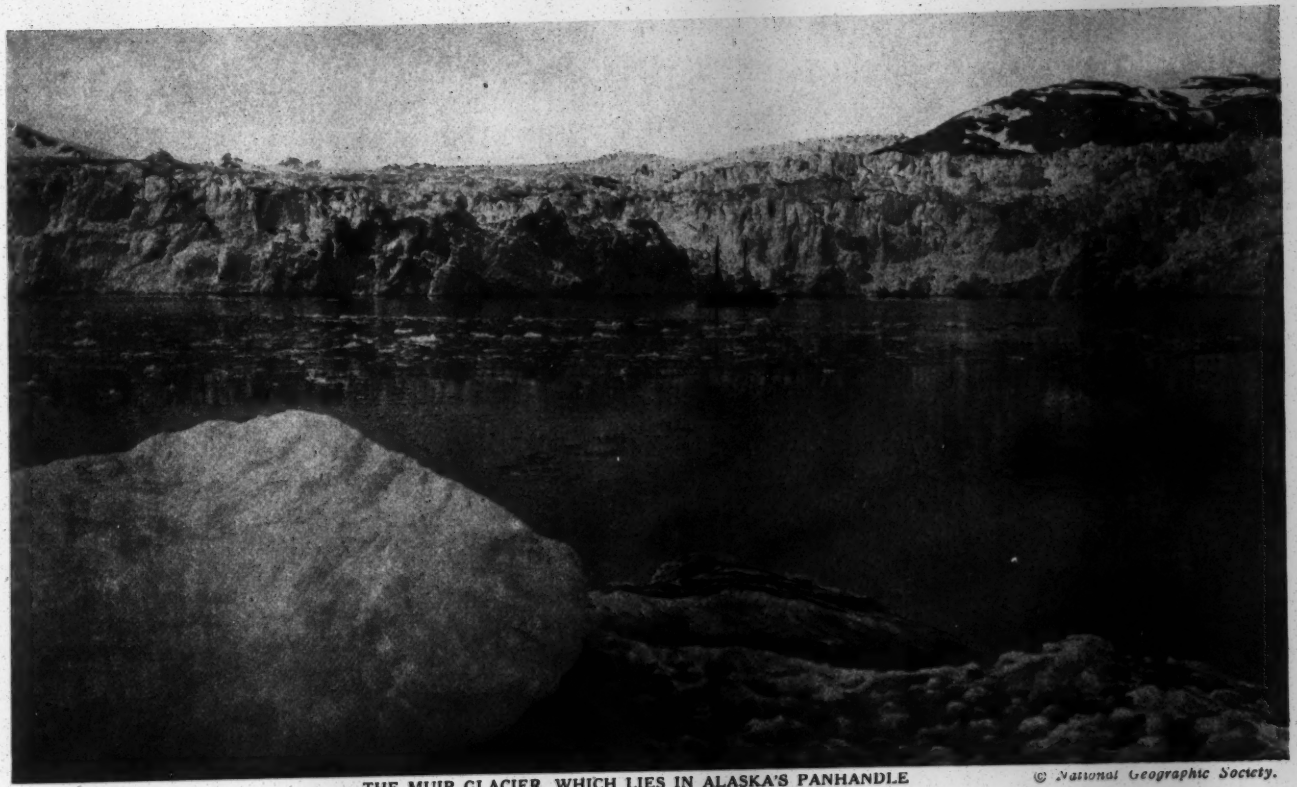
Of the four judicial districts of Alaska the first has the largest population of white men and in most respects outranks the others, although the third division, along the southern reaches of the peninsula, looms larger in many important commercial factors. The Panhandlers propose that Congress include highly productive parts of the third judicial district, Copper river country, in the new territory. Of four Alaskan cities which had a population of more than 1,000 in 1920, Juneau, Ketchikan, and Sitka, the former, the capital of Alaska, are located in the first division, while Fairbanks, which has a population only one-fifth as great as the combined population of Juneau and Ketchikan, is located on the Tanana river, in the fourth judicial district.

Ice Barrier Separates Districts

The wall of ice which separates lower Alaska from upper Alaska is made up of hundreds of glaciers moving down the steep sides of the Rocky Mountains which tower above the Inland Passage. This passage, an arm of the sea, forms a breakwater between the ocean and the mainland. So ruggedly mountainous and wild is this section of the coast, particularly between Skagway and the Copper river section, that no explorer has traveled, by land, entirely over American territory from Juneau or Skagway to the other district.

Wire communication between the two parts of Alaska is maintained by submarine cable and by a telegraph line through Canada down the Yukon valley, but physical communication is either by boat across the Gulf of Alaska or through the Skagway gate to the Yukon and thence to central Alaska. Even the shortest journey from Juneau to Seward takes all of two days, a longer trip than from New York to Kansas City.

Population distribution bears upon the recommendation of the Alaskan



THE MUIR GLACIER, WHICH LIES IN ALASKA'S PANHANDLE

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This glacier, one of the largest on this continent, has a frontage of seven miles along the sea. During the summer it affords a wonderful spectacle to tourists, for great masses of ice, often larger than an average house, break off and plunge into the water (See Bulletin No. 1).

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Lignite, "Poor Relation" of Coal

POSSIBILITY that a new type of fuel may be introduced in the United States through the use of lignite or brown coal focuses attention both on the lignite resources of United States and the present European practices in using this kind of fuel.

An American housewife would be puzzled, indeed, if she were put in a German kitchen and asked to cook on one of the latest German brown coal burning stoves.

"Where is the stove?" would be her first question.

She would be shown a big case that looks like a cross between a chiffonier and an ice chest.

"Where is the fuel?" would be her next question.

A "Sugar Scoop" of Fuel

A bin at the bottom of the chest would reveal to the American housewife "grudekoks." This is lignite char, the material trade briquet coal is made from. It is a sort of coal charcoal, individual pieces of which are seldom larger than grains of corn. Above the fuel bin are two long narrow drawers. The German housewife, used to a chest stove, will open the top drawer, sprinkle a sugar scoop of grudekoks on a corrugated grate and light the fire. The ash falls into the lower drawer. Now she is ready to cook.

Suddenly a broad door above the drawers is dropped and it becomes a shelf in back of which is the cooking surface of the stove. Above the stove are two ovens and at one side is a water heater. And all this is contained in a solid oblong case insulated to conserve heat.

West and South Are Sources

If such German methods were imported into the United States it might mean that along with the other monarchs in these later days of democracy, King Coal, the anthracite of the Lehigh Valley, and the heir apparent, bituminous of the Appalachians and the Middle West, would have to defend their mighty seats. The immediate challenger would come out of the west and the south. The presence of a poor relation of the coal society, called lignite or brown coal, in South Dakota, North Dakota, and Montana, and in Texas, Mississippi, Arkansas and Alabama, has long been known. Not until recently, however, has the margin in America between the cost of mining and shipping anthracite and bituminous and the cost of preparing lignite to meet the anthracite and bituminous standards, been sufficient to interest business in the development of the latter.

Unmined Billions

The government coal geologists estimate that the deposits of lignite in the United States, exclusive of Alaska, aggregate about 740,000,000,000 tons, of which fully one-third belongs to the public lands.

A few years ago it was not considered important whether there was much or little of this coal. It was good enough, perhaps, for the farmers to dig out

UMI

citizens of the first judicial district who are looking forward to early statehood. The whole territory of Alaska has now a population of 60,000, half of which are natives. Lower Alaska claims 21,433 of this total, but it has approximately three whites to one native. Juneau in lower Alaska is the present capital of the territory and the residence of the governor.

The conception that Alaska is a country of mountains is as erroneous as the conception that it is as cold as Greenland. At Juneau the temperature seldom goes below zero and this modulated climate is found in practically all southern Alaska, swept by warm winds from the Pacific Ocean which bring heavy precipitation to this coast.

Heat Prostrations in "Cold" Alaska

At Fairbanks, which is in the same latitude as Iceland, three men were prostrated by the heat last summer. Fairbanks is the center of a great section which would surprise the individual who expected only mountains in Alaska. Away from the south coast, the country back of the barrier of mountain ranges stretches broadly as a great inland plateau, rolling gently north to the reaches of the Bering Sea. Tanana and Fairbanks are centers of an expanding agricultural region which is having considerable success in producing quick-growing crops. The big inland plain is inhabited chiefly by huge herds of reindeer guarded by native owners.

Most of the minerals for which Alaska is noted—gold, silver, and copper—are found in both upper and lower Alaska. The Juneau district produces three times as much gold as the rest of Alaska and it has some of the great copper mines of the country. Other important mines lie in the Copper river district. A further contrast between the two sections is found in shipping statistics; while 1,518 ships cleared at the fishing port of Ketchikan, only 309 clearings were reported for all other Alaskan ports in 1922.

Lower Alaska has been the objective of most of the tourists who visit the American "Switzerland." The magnificent scenery of the Inland passage focused much interest, but with the completion of the great Tanana River bridge on the Seward-Fairbanks railroad this past year, many visitors are pushing on across the Gulf of Alaska to see the beauties and wonders of the interior as did the late President Harding and his party.

Bulletin No. 1, January 28, 1924.

Form for Renewal of Bulletin Requests

Many requests for the Geographic News Bulletin were made for the year ending with this issue. If you desire the Bulletins continued kindly notify The Society promptly. The attached form may be used:

School Service Department
National Geographic Society
Washington, D. C.

Kindly send ..... copies of the Geographic News Bulletin for the school year beginning with the issue of ....., for classroom use, to

Name .....

Address for sending Bulletins .....

City ..... State.....

I am a teacher in .....school ..... grade

Enclose 25 cents for each annual subscription.

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Mexico's Inevitable Battleground

A WAR in Mexico almost invariably involves two early steps: a seizure of Vera Cruz and a battle near Puebla. A base on the east coast means a necessary link with the outside world, and when an advance is made from such a base toward Mexico City, the issue is almost sure to be joined at Puebla which lies on the very edge of the Mexican plateau at the entrance to the great Valley of Mexico, in which the capital is situated.

Battleground in Aztec Days

Doubtless in the dim past the invading Aztecs swarmed up on to the plateau near the site of present-day Puebla and were met there in battle by the older Toltecs, bent on defending their valley homes. A battle near there in which Cortez defeated the Aztecs opened the door for his advance to the Capital City in 1519. Americans repeated history when they fought the Mexicans there in 1847; and there was the seemingly inescapable battle of Puebla when Maximilian's French troops advanced toward Mexico City in 1862. Almost every one of the numerous Mexican revolutions in recent years has had its battle or its skirmish at this eastern gateway to the Valley of Mexico.

Puebla's full name is "Puebla de los Angeles," "Town of the Angels." But the modern Mexican has shortened it, seemingly having no more liking for the long geographical names furnished by the Spaniards than his American brother to the north who has clipped to its last two words the original mouth-filling name of California's largest city—Nuestra Senora Reina de los Angeles.

Americans Besieged in Plaza

Though in name a town, Puebla is in reality a full-fledged city of more than 100,000 population. In size it is the third city of the Republic and it has the reputation of being one of the cleanest and healthiest.

Like most other Mexican cities, Puebla has a great plaza which is the center of its religious, business and social life. Across one side is one of the largest and handsomest cathedrals in America topped by an expansive dome of glistening colored tile. Opposite, across the central parked space, is the municipal palace; and facing the park on the two other sides are the city's best business buildings and clubs. The wide sidewalks of the plaza business blocks are covered by unbroken arcades. In the covered spaces, known as "Portales," are numerous small stands of sidewalk merchants.

The tall trees of the central plaza, which give it the aspect of a tropical forest, are a demonstration of the favorable climatic conditions of Puebla. During the Mexican War this plaza was a dreary expanse of flagstones on which a little handful of sick Americans, besieged by heavy forces of Mexicans, held out behind barricades for a month until rescued by a party of their countrymen.

a few loads and burn in their homes throughout the Great Plains region, where it is found; but it contained too few heat-units and too much moisture to generate steam under a boiler, so it was looked upon as of no industrial importance whatever.

Mention of Alaska's lignite deposits should not be omitted. About one-half of the Territory's coal is believed to be lignite, and, while there is not sufficient information upon which to base even an approximate estimate of the total tonnage of the various fields, it is probable that the reserve of lignite may be 500,000,000,000 or more tons.

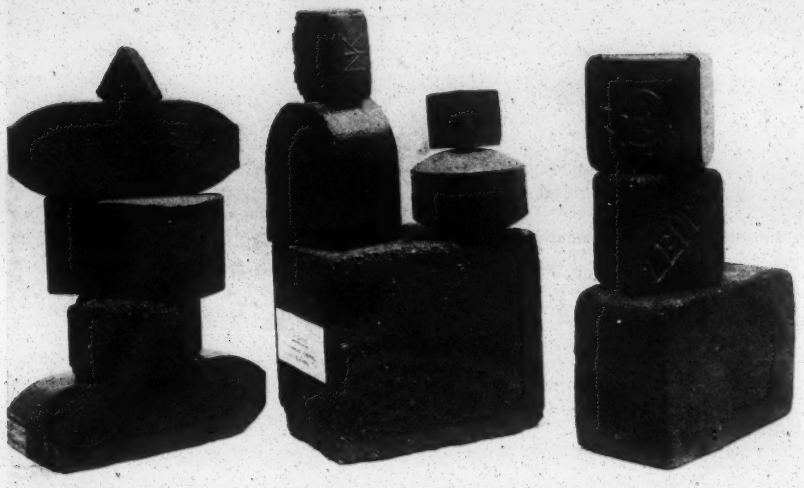
Highly Developed in Germany

As a result of experiments reported by the United States Bureau of Mines at Grand Forks, South Dakota, many American citizens and business establishments of the future may receive their coal in little rectangular blocks or briquets. A typical briquet weighs about a pound and is slightly smaller in size than a standard wood paving block. In countries such as Germany, where nature has not been so provident with the stone that burns, the briquet industry has already reached a high state of development.

In 1921 Germany manufactured 28,000,000 tons of briquet coal from brown coal. Lignite is practically the only coal left to Germany outside the Ruhr and the recent occupation of that district caused a rapid development in briquet manufacture. Germany's lignite is found near Cologne and in Saxony and Halle.

Lignite cannot be used to advantage in its natural state, but by cooking off volatile matter and moisture, it can be given a high fuel efficiency. To find a cheap method of doing this is the problem now being subjected to experiments.

Bulletin No. 2, January 28, 1924.



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SOME OF THE VARIOUS TYPES OF FOREIGN BRIQUET COAL

Briquets range in size from little fellows no larger than a small hen's egg, intended for domestic use, to blocks considerably larger than an ordinary building brick (See Bulletin No. 2).

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Salmon's Habits Defy Explanation by Science

SILVER tags have been attached to the dorsal fins of numerous salmon hatched in Canadian waters, according to dispatches from Ottawa, in an effort to trace their wanderings and to fathom some of the unsolved mysteries in the lives of these important fishes.

Some of the queer traits of salmon are known to few of the millions who eat these fish from tin cans. Robert F. Griggs, in his book, "The Valley of Ten Thousand Smokes," tells of finding a run of salmon in a partially ash-choked stream in the heart of a region devastated by the great eruption of Katmai volcano in Alaska. The observations were part of a comprehensive scientific study of the region made under the auspices of the National Geographic Society.

"Everywhere we kept a sharp lookout for salmon," says Dr. Griggs, "but found none until 1917, when we discovered one little brook in which red salmon were running in considerable numbers. This stream did not appear different in any way from a score of others which coursed down the mountain side to join Katmai River. But although we could find no fish in any of the other streams, we caught them here almost every time we came by, taking altogether about fifty in the course of a month."

Huge Fish in Tiny Streams

Readers unfamiliar with the spawning habits of the salmon may be surprised to learn that fish two feet long could be found in a stream only a few inches deep; but the initiated will recognize that there is nothing unusual in such an occurrence. It is well known that some species of salmon work their way up into brooks so shallow that their backs stick out before they deposit their eggs.

Commenting further on the remarkable "homing instinct" of the salmon, especially the sockeye, Dr. Griggs wrote:

"At Brook Falls in the outlet from the lake of the same name, at the proper season one may watch the salmon as they jump clear of the water and ascend the falls. Here we stood for hours, held by the fascination of one of the most wonderful sights afforded by the animal kingdom, as the endless procession of fish kept leaping high in the air, up and over the falls.

Reconnoiter Before Leaping Up Falls

"Never did a second elapse between jumps. Sometimes as many as six fish were in the air at once. The jump appeared to require their full powers; none made the attempt except at the lowest notch in the falls, and none jumped clear over in a way to suggest that they could have gone much higher if necessary. Many of the leaps were so wide of the mark as to give the impression that they were not serious attempts, but rather in the nature of reconnaissances—efforts to learn the best place for the ascent. Often the fish struck themselves on the sharp rocks. Among those below the falls were many terribly lacerated by such accidents—so far gone that there was little probability of their ever succeeding in the leap.

Pueblans Ride in Flivver-Driven Street Cars

Among the trees that have grown so luxuriantly in the last three-quarters of a century are shady walks, fountains and band-stands; and there in the evening crowds of people congregate.

Puebla has passed the cobblestone era. Its principal streets are as well-paved with asphalt as Pennsylvania Avenue or Broadway. Much of Puebla's modern aspect is the result of developments in recent decades. In a modernizing "boom" not many years ago workmen tore down numerous viaducts that had spanned the streets for years for the convenience of pedestrians in the rainy season.

Puebla has put away its horse cars, but it has not embraced electric traction. The engines of a popular light American automobile have been installed in the cars that mules and horses once pulled, and Pueblan "fares" receive at once the novel, if jumbled, sensations of strap-hangers and flivver riders.

Bulletin No. 3, January 28, 1924.

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A PILE OF GOLD IN AN ALASKAN ASSAY OFFICE

Individual fortunes have been made in Alaska larger than the price paid to Russia for the whole territory (See Bulletin No. 1).

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More Slaves Than Freemen in Ethiopia

ABYSSINIA, whose formal application for admission to the League of Nations was held up by that body because of the prevalence of slavery in the country, is the only free and independent state in the whole of Africa except Egypt and Liberia.

It seems paradoxical, too, that one of the three free states in Africa, lying in the protruding portion of the eastern part of the continent, should also be the last home of open slavery.

Even Servants Have Slaves

One traveler through the country said that he believed there were more slaves in its capital, Addis Ababa, than there were freemen. Servants to Europeans living in the country have their own slaves, and sometimes it is impossible for Americans or other foreigners to keep from owning slaves, because if a slave happens to be given to a resident of the country, there is no known method by which he may be emancipated. If he is set free he is subject to capture and enslavement by someone else.

In fact, so many of the people of the outlying districts have been captured, chained together and taken in droves into the great slave market at Jimma, that it is possible to march for mile after mile, day after day, through a once flourishing agricultural district without seeing a man, woman or child. Recently it has been reported that the traders are beginning, for lack of people in their own country, to make raids into the neighboring Kenya colony, the British Sudan, and elsewhere for their quarries.

Natives Still Swear "By Menelik"

Few countries show such a marked change during a short period of ten years as Abyssinia has since the death of its "grand old man," Menelik, who was so progressive in his ideas and military defense of his kingdom that Italy gave his country—the ancient empire of Ethiopia—its independence. To swear "by Menelik" is today the most binding oath a native can take.

In his time a child might drive a cow from the confines of the city to a remote corner of the kingdom without being molested, but today that same child, grown to manhood, might be snatched up before he had proceeded very far on his journey and sold into slavery in some distant city.

The old king, during his reign of a quarter of a century, built up his capital city, laid out metaled roads, and railway lines, installed telephones, and promoted banking, schools, sanitation, a water supply, hospitals, and a definite system of law and order. Today his railroad is under French management and depends upon the French for its financial backing, the streets are neglected, and even the foreign legations have to be barricaded to keep out the brigands.

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"Perhaps the most interesting feature of the whole performance is the instinct that urges the salmon over the falls. How can they tell that there is another lake above? Yet by some means they are unerringly guided to the outlets of lakes above, for they do not run to other streams. Why should they seek the upper lake, when the waters they have just passed through would serve as well, as is attested by the fact that they are perfectly satisfactory to other thousands of their brethren?

Return to Spot Where Hatched

"Professor C. H. Gilbert of Stanford University, who knows the habits of the salmon better than anyone else, tells me there is good evidence that the individual salmon returns to the particular water in which it was hatched. As indicated by the anomalous run observed in a tributary of Katmai River they are apparently able to find, not merely the same general locality, but by some instinct are guided back to the particular spot where they began life. The mysterious sense by which they choose their way among waters apparently indistinguishable is quite incomprehensible to us.

"If, like the bird migrations, it were a journey undertaken every year during the life of the fish, it would not be so remarkable, for the old fish could teach the young the path. But the salmon make the trip only once, at the end of their allotted span. When they have spawned they turn over and die, leaving windrows of rotting carcasses on the shore.

"Their only previous experience with the stream was when as small fry they passed down from the spawning ground and out to sea. Can it be that they retain something analogous to memory of the 'landmarks' passed on their one previous journey? And, finally, why such frantic effort when all is to end so soon? These questions we may not answer. All we can say is, that these wonderful instincts, though leading to the death of the individual, are clearly to the advantage of the species, whose perpetuation is thereby assured."

Bulletin No. 4, January 28, 1924.

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SORTING MEXICAN PALMS FOR AMERICAN STRAW HATS

In the mountain towns of Nayarit the leaves of a certain low palm tree are gathered and dried for shipment to northern hat factories (See Bulletin No. 3).

Nominally Christian Fifteen Centuries

Abyssinia also enjoys a peculiar distinction among the native states of the continent—since the fourth century, it has been known as a Christian nation. Menelik's vain and arrogant successor bound a gorgeous Moslem turban around his woolly head, however, and turned the faces of his people toward Mecca, in order that he might satisfy his desire for a harem. But when he was deposed in 1916 and a daughter of Menelik, Waizeru Zauditu, and Ras Taffari were proclaimed rulers, the historic faith was restored.

The tactful individual who wishes to get himself into the good graces of the natives always remembers that he must speak of them as Ethiopians, for the term Abyssinian means "mongrel" and probably came into usage originally because it is hardly possible to find on the earth so mixed a population, ranging from certain light-skinned individuals of Mediterranean stock, through mulatto, and dusky-skinned Arab, to "high yellow," "gingerbread," and the true blacks.

The Ethiopians speak of Europeans as the "Red Faces." Many of them are particularly fond of raw meat, and the warmer and fresher the kill the better they like it.

Bulletin No. 5, January 28, 1924.

Notice to Teachers

IN CONNECTION with Bulletin No. 2, "Lignite, Poor Relation of Coal," teachers will find useful, for reading and reference assignments, the following bibliography of material on all phases of the coal industry in the National Geographic Magazine. Files of the National Geographic Magazine are to be found in progressive school libraries and in all public libraries.

In subsequent issues of the Weekly Geographic News Bulletins material on other industries and products of the land and sea will be keyed in connection with bulletins on such subjects. Typical industries or products will be indexed in this manner, such as wheat, cotton, glass making, cement making, silk weaving.

Further references to articles dealing with these subjects will be found in the Cumulative Index to the National Geographic Magazine 1899-1922.

COAL

World Resources

Canada: May, 1922, pp. 517, Vol. 41.
Chile: September, 1922, pp. 273-249, Vol. 42.
Turkey: July, 1918, pp. 66, Vol. 34.
Japan: November, 1904, pp. 446-448, Vol. 15.
Mexico: February, 1902, pp. 71-77, Vol. 13.
Mongolia: May, 1921, pp. 513, Vol. 39.
Pennsylvania: May, 1919, pp. 379, Vol. 35.
Germany: May, 1922, pp. 553-5-8, 564.
Alaska: January, 1910, pp. 83-88, Vol. 21.
United States: May, 1910, pp. 446-451, Vol. 21.
United States: November, 1910, pp. 935-944, Vol. 21.

Mining

November, 1918, pp. 407-434, Vol. 34.

Transportation

Coal Trains: April, 1923, pp. 367-377, Vol. 43.
Coal Road W. Va. to Sea: April, 1923, pp. 356-360, Vol. 43.
Coaling a Steamer at Port Said: October, 1922, pp. 390, Vol. 42.
Coaling Steamer, Azores: June, 1919, pp. 519, Vol. 35.
Importance of Coaling Stations: February, 1914, pp. 248, Vol. 25.

Uses

"An Ideal Fuel Manufactured Out of Waste Products," December ,1910, pp. 1067-1074, Vol. 21.
"Coal Tar Colors Destroy Orchella Industry," July, 1923, pp. 96, Vol. 44.
"In Ruhr, Germany," May, 1922, pp. 553-564, Vol. 41.

Comprehensive Special Articles

"Coal, Ally of American Industry," by William Joseph Showalter, November, 1918, pp. 407-434, Vol. 34.
"Our Coal Lands," by Guy Elliott Mitchell, May, 1910, pp. 446-451, Vol. 21.
"A New Source of Power-Lignite," by Guy Elliott Mitchell, November, 1910, pp. 935-944, Vol. 21.